

SEQUENCE LISTING

31

30

32

MADE AND Shang, Ning and Anthony Purchio

```
<120> METHODS AND COMPOSITIONS FOR SCREENING FOR ANGIOGENESIS MODULATING COMPOUNDS
```

- <130> PXE-012.US
- <140>US/09/465,978
- <141> 1999-12-16
- <150> 60/152,522
- <151> 1999-09-03
- <160> 51
- <170> PatentIn Ver. 2.0
- <210> 1
- <211> 31
- <212> DNA
- <213> Artificial Sequence
- <220>
- <223> Description of Artificial Sequence: primer PGKF
- <400> 1
- atcgaattct accgggtagg ggaggcgctt t
- <210> 2
- <211> 30
- <212> DNA
- <213> Artificial Sequence
- <220>
- <223> Description of Artificial Sequence: primer PGKR
- <400> 2
- ggctgcaggt cgaaaggccc ggagatgagg
- <210> 3
- <211> 32
- <212> DNA
- <213> Artificial Sequence
- <220>
- <223> Description of Artificial Sequence: primer NeoF
- <400> 3
- acctgcagec aatatgggat cggccattga ac
- <210> 4
- <211> 37
- <212> DNA
- <213> Artificial Sequence

	<220> <223> Description of Artificial Sequence: primer NeoR	
	<400> 4 ggatccgcgg ccgccccag ctggttcttt ccgcctc	37
	<210> 5	
	<211> 30	
	<212> DNA	
	<213> Artificial Sequence	
	<220> <223> Description of Artificial Sequence: primer TKF	
	<2235 Description of Artificial Sequence. Primer	
	<400> 5	2.0
	ggateeteta gagtegagea gtgtggtttt	30
•	<210> 6	
	<211> 30	
	<212> DNA	
•	<213> Artificial Sequence	
	<220>	
	<223> Description of Artificial Sequence: primer TKR	
•	<400> 6	2.0
	gageteeegt agteaggttt agttegteeg	30
-	<210> 7	
	<211> 20	
	<212> DNA	
	<213> Artificial Sequence	
	<220>	
	<223> Description of Artificial Sequence: primer F5R51	
	<400> 7	20
	gtacatttaa atcctgcagg	20
	<210> 8	
•	<211> 20	
	<212> DNA	
	<213> Artificial Sequence	
	<220>	
	<223> Description of Artificial Sequence: primer F5R52	
	<400> 8	20
	ageteetgea ggatttaaat	20
	<210> 9	
	<211> 77	
	<212> DNA	
	2010 Artificial Secuence	

```
<220>
<223> Description of Artificial Sequence: primer F3R31
ggcccgggct taattaatgc atcatatggt accgtttaaa cgcggccgca agcttgtcga 60
eggegegeeg geeggee
<210> 10
<211> 77
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: primer F3R32
<400> 10
gatcggccgg ccggcgccc gtcgacaagc ttgcggccgc gtttaaacgg taccatatga 60
tgcattaatt aagcccg
<210> 11
<211> 39
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: primer VN1R
<400> 11
                                                                   39
ctgtatttaa atctgcccac cctattcagg acagtagtc
<210> 12
<211> 31
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: primer VN1F
<400> 12
                                                                   31
ccaatgcatc aacccagcca ggaggagtgc g
<210> 13
<211> 38
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: primer VN2R
                                                                   38
aacgcgtcga cttcggagat gtttcgggga taaccagg
<210> 14
<211> 40
<212> DNA
<213> Artificial Sequence
```

<220>		
<223> Description of Artificial Sequence: primer VN2F		
<400> 14		
ttggcgcgcc ccatagagaa gagacaccaa aggcacgctc	40	
<210> 15		
<211> 36		
<212> DNA		
<213> Artificial Sequence		
<220>		
<223> Description of Artificial Sequence: primer FosB1F		
<400> 15	2.6	
ctgtatttaa atcccgtttc tcactgtgcc tgtgtc	36	
<210> 16		
<211> 35		
<212> DNA		
<213> Artificial Sequence		
<220>		
<223> Description of Artificial Sequence: primer FosB1R		
<400> 16	3.5	•
gteteetgea ggetteetee teettgttee ttgeg	35	
<210> 17		
<211> 35		
<212> DNA		
<213> Artificial Sequence	·	
<220>.		
<223> Description of Artificial Sequence: primer FosB2F		
<400> 17	2.5	
aacgcgtcga cggatgggat tgacccccag ccctc	35	
<210> 18		
<211> 33		
<212> DNA		
<213> Artificial Sequence		
<220>		
<223> Description of Artificial Sequence: primer FosB2R		
<400> 18	2.2	
ttggegegee cettgeetee aceteteaaa tge	33	
<210> 19		
<211> 31		
<212> DNA		
ana Amtificial Compance		

<220> <223> Description of Artificial Sequence: primer VF1	
<400> 19 acctcactct cetgtetece etgattecea a	31
<210> 20 <211> 25 <212> DNA <213> Artificial Sequence	
<220> <223> Description of Artificial Sequence: primer VR1A	
<400> 20 gctctggcgg tcacccccaa aagca	25
<210> 21 <211> 28 <212> DNA <213> Artificial Sequence	
<220> <223> Description of Artificial Sequence: primer VF2	
<400> 21 ccctttccaa gacccgtgcc atttgagc	28
<210> 22 <211> 29 <212> DNA <213> Artificial Sequence	
<220> <223> Description of Artificial Sequence: primer VR2	
<400> 22 actttgcccc tgtccctctc tctgttcgc	29
<210> 23 <211> 28 <212> DNA <213> Artificial Sequence	
<220> <223> Description of Artificial Sequence: primer KF1	
<400> 23 gctgcgtcca gatttgctct cagatgcg	28
<210> 24 <211> 30 <212> DNA <213> Artificial Sequence	
<220>	

·.

```
<223> Description of Artificial Sequence: primer KR1
<400> 24
                                                                    30
ttctcaggca cagactcctt ctccgtccct
<210> 25
<211> 32
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: primer KF2
<400> 25
                                                                    32
cagatggacg agaaaacagt agaggcgttg gc
<210> 26
<211> 25
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: primer KR2
<400> 26
                                                                    25
gaggactcag ggcagaaaga gagcg
<210> 27
<211> 29
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: primer TF3
 <400> 27
                                                                     29
 agcttagcct gcaagggtgg tcctcatcg
 <210> 28
 <211> 31
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Description of Artificial Sequence: primer TF2
 <400> 28
                                                                     31
 caaatgcacc ccagagaaca gcttagcctg c
 <210> 29
 <211> 33
 <212> DNA
 <213> Artificial Sequence
 <223> Description of Artificial Sequence: primer TR1
```

٠,

```
<400> 29
                                                                33
gctttcaaca actcacaact ttgcgacttc ccg
<210> 30
<211> 24
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: primer VR2F
<400> 30
                                                                24
cgctagtgtg tagccggcgc tctc
<210> 31
<211> 38
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: primer VR2R
<400> 31
                                                                38
ataagaatgc ggccgcctgc acctcgcgct gggcacag
<210> 32
<211> 4486
<212> DNA
<213> Mus sp.
<400> 32
aagettgeag ggaggtagga ggeageetgt ggegttgatt caatgeacet ggeettatee 60
tcggatgaga tcggtcacca gtcaaaaact gtgagcttga aggtcttggg tgcttaacat 120
ctatttttac aaatcttatt tagcaactta gaactgtgaa atattggaaa gctacttaaa 180
ccttctaaac tccctcctcc acactatgag aatgttacat tttctattca gttatttttg 240
agcagtaaac agatgaatca aggaatatgc ccatcacatc aagagtgctc ctaaatggac 300
ttgcttgtta ttcatttaca gtgtggcccc ttgactttca tcggcactcc tagcagaaaa 360
caaaatccgc cagatggagc tggagagatg gctcagctgt taagaatact tatccctaca 420
caggecetgg agecagttee cageacecae aeggtggete acaaceatet gtaacteeag 480
ttctaggaga cccgactccc tcttctgtct gaaaacacca ggcacgcgtg cggctacata 540
caaacatgaa agcaaaatac acacattaca taaataaatc ttaaaaaatg attcggggtg 600
ggggaaggaa aaaaaaggat gttagaaaat cgatgtaact gttttttcct tttgcacaga 660
tctaagtagg gaaggagaac attctcttac catcgagaat aattgttttc attgccccca 720
agtetgetaa tagagettge tacetteatg getgtegtaa ggatgaggea aagatggaet 780
tcagctttca gactgtgtct gctcaaatgt tggctactcc tgttttctga cccccttctc 840
tggtgcaatg tggactttca attaatttcc ctgcatcttt tacatatttg atttaaaaaa 900
tattttattt tatgtaattg tatgtatatg catgtcaata agcatatgtg tgtgtgtttc 960
catggaaacc aaggcaacag attetecaga getgtagaaa tgggetgtga gaegeeeact 1020
gtgggtgctc ggaaccaaac tcgggtcctg tggaaagaca gcgagcaccc ataatgcaga 1080
gtaactatag gaaagtacat gggtatatag atccccagta ccaagattct tcctttgcag 1200
gtagcacaac ttggtctgct tcacataaag aatggaaagt cattaaaaca ctcatcacac 1260
tgtaaagtag aattgaactc tgacagaaca agcgaagtga gtctgacttc caggtaactg 1320
agcettettt teeteetaaa gacacaagee atacacagag taaaataaae ttgggeatgg 1380
tgagaaggaa acaacgcagg agggctagcc aagtctgaga gtcgtgagtg tgctcggttt 1440
```

```
ataaacggag cccaccttgc cagcgaggta gtcacatgct ctgctaaaca gaaacttaag 1500
aaaacactta cacgaagcaa acatggggaa gtgccatgca agcatgtgac tgactggtgg 1560
caatgaccga aaccacagca gccactagaa aaggaagggt agtgcgccac actgtagttg 1620
tgaaaatgaa cttattcatt tattttgaaa aacgtgtaag aagcaaagat gtcttctttc 1680
ccacctacct ttgcggcagg cgagcacttc ctggaattta taaagtgcga tctttctggg 1740
gacttctcat aacatttcct actgctcatc tatgtctgtg tcaaatagag aatgctcttg 1800
aacaagtgtg tgtgtgtgt tgtgtgcgcg cgcacgcgca ctcactcctg ctctgttgag 1860
gtccagtttt gatggtcccg ccagaggtat atttgagtat catttctcaa gagcttcagc 1920
tgggagacac tgcctcttac tggcctgaag gtcactagct gattcatctc cgtttgggct 1980
ggcgcgcctt ggggatcctc ctatctctcc ttccccagtg ctgggataac aaggttggca 2040
ccacatgagc cttttaaaat gtgagtttgg aagctcaaac gcaggttttc atgcttgcac 2100
cctttttaaa acacatcttg tctttaaaaa aaaaaaaagg cccaaaacaa gtgtaaagta 2220
tttccctatg tgtgtggagg gagggagtat aggaggctga tttcactgag atcctgttaa 2280
atttgggtgc catagccaat caaagacgca tcgtttcctc taagaattct aaatggggcg 2340
attaccacgg gcctgcaggt tctggtttgt attagaggag acactgtctt cttaagtaaa 2400
acatagaagg ggaagtgtcc agaattgtaa ataaggcttc gagagaagcc ttgtctggcc 2460
accgggatgg agaagaceta cettegeeta tecaggatee ategteeete cetetaceca 2520
gatctgacag ccctccttgg ctcttttgct gaggtttgtt tgagtttgtt ttactctctg 2580
caagagaagt ttccttaaac attctaccct gttcacaagt aaatacacct cttagctaag 2640
aggccacaca cccaggggaa caccgataaa aagaacaagc cagaaccttc agaacgctgt 2700
cgataggtac accaagcagc cttcatacgg agttttcatt cgtgaggagc tgaatataca 2760
acaaagctaa atgtgagcag accaggcatg cctctgctaa atgaggatgc ccacaccaaa 2820
catgcccaag atcttcaagt ataattttat tatatagatt cgctatgtgt tgacatgttt 2880
ttatagtgaa cctggatttt acaaaccctc ctggtttgcc acctgcttct ggcaccatac 2940
ttgaggctta ggcacgtgat aaaggagcat gcctgtttcc ccccttattt tttttaaaga 3000
aaagcaccat gttacatcat taatcatgca tatcagtgta gtttagatcc gatgtagaga 3060
caataatctt atctctttgt ctggctgaaa gactgtcctt taaactatca ttctaaatgc 3120
atttggtttt tgccaggagt aaaacatgtc acaagatatt tgttgtcatt tcccaggcgt 3180
ggaaggaaag gaatggaaag aaaacgaggg gtgaaggctg ctgttcctct ctagtcgcta 3240
cttgaagtet acatagetgg ggggggggg gggactgtte acatgggace ggttteetet 3300
ttgttcctac actggcgcct ctggcaagaa actctccctt ctcttccccc caagcatatc 3360
ttggctgaaa ggtcagctct gaaaaggggc ctggccaaag ttactgtagg ggaccgtggt 3420
catggaactg ggtagacaaa agcactctag cagccactgg agaaggaccg ggggctcttc 3480
tetgtgcatt tgccctggag ccctgaccac cgccagctcc ctgcatctcc ttgctatggg 3540
ttttctggac cgagccaggc aggagttcac aaccgaaatg tcttctaggg ctaatcaggt 3600
aacttcggac gatttaaagt tgccagatgg acgagaaaac agtagaggcg ttggcaacct 3660
ggataagcgc ctatcttcta attaaaacat tcagacgggg cggggggatgc ggtggccaaa 3720
gcaccataaa acaaaacttc caagtactga ccaactcact gcaagtttgt gccccgagta 3780
catctaggtt caggggtett gtetteatge teccaactge gggeggattt ttggteeett 3840
gggactttca gtgcagcggc gaagagagtt ctgcacttgc aggctcctaa tgagggcgca 3900
gtgggcctcg tgtttctggt gatgcttccc aggttgctgg gggcagcaag tgtctcagag 3960
cccattactg gctacatttt acttccacca gaaaccgagc tgcgtccaga tttgctctca 4020
gatgcgactt gccgcccggc acagttccgg ggtagtgggg gagtgggcgt gggaaaccgg 4080
gaaacccaaa cetggtatee agtgggggge gtggeeggae geagggagte eecaeceete 4140
ccggtaatga ccccgccccc attcgctagt gtgtagccgg cgctctcttt ctgccctgag 4200
tectcaggae eccaagagag taagetgtgt tteettagat egegeggaee getaeeegge 4260
aggactgaaa gcccagactg tgtcccgcag ccgggataac ctggctgacc cgattccgcg 4320
gacaccgctg cagccgcggc tggagccagg gcgccggtgc cccgcgctct ccccggtctt 4380
gcgctgcggg ggcgcatacc gcctctgtga cttctttgcg ggccagggac ggagaaggag 4440
                                                                 4486
tetgtgeetg agaactggge tetgtgeeca gegegaggtg eagatg
```

<210> 33

<211> 38

<212> DNA

<213> Artificial Sequence

```
<220>
<223> Description of Artificial Sequence: primer VEF
                                                                   38
acacgcctcg agaaatgtgc tgtctttaga agccactg
<210> 34
<211> 40
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: primer VER
<400> 34
acacgcgtcg acgatccaat aggaaagccc ttccataaac
                                                                   40
<210> 35
<211> 511
<212> DNA
<213> Mus sp.
<400> 35
aaatgtgctg tctttagaag ccactgcctc agcttctgca gctcagatac caaaggaagt 60
ctggtacaca gcatgataaa agacaatggg acggggtcac agtggctccc gtccctttca 120
ggggtatgga gacgagctgt agagagatgt ctccagggag ttttcattaa tcagcaattt 180
agtcagatct gtgcatccta tgctttacaa gaaatgtcag tgggcctgag atcatcagat 240
ggaggttcat cgggtttcaa tgtcccgtat ccttttgtaa gaccttgaag ttggcaacgc 300
aggaaaacag gaactccacc ctggtgccgt gaattgcaga gctgttgtgt tggtttgtga 360
ccatctgccc attettectg ttatgacaga gettgtgaac tttaactggg actggggcaa 420
agtcaatccc acctttatac aatgaattgc tgaagaggcc ttttaaaact tggagtgtgc 480
                                                                   511
attgtttatg gaagggcttt cctattggat c
<210> 36
<211> 34
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: primer
      GL3B-Forward
<400> 36
                                                                   34
gtacttaatt aagcttggta cccggggcgg ccgc
<210> 37
<211> 34
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: primer
      GL3B-Reverse
<400> 37
```

```
34
agctgcggcc gccccgggta ccaagcttaa ttaa
<210> 38
<211> 26
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: primer T2
     Forward
<400> 38
                                                                  26
tatcaacact cgggaggctg agggag
<210> 39
<211> 41
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: primer T2
      Reverse
<400> 39
ataagaatgc ggccgcactt ccccagatct ccccatccag c
                                                                  41
<210> 40
<211> 7093
<212> DNA
<213> Mus sp.
<400> 40
qqtaccaaag catagaacta cagatccgct ctctgcctgt accaccctct ggcatttaat 60
cacacaatgc ttggttttgt tcttcaactt ttcctgttat gatgcagtcc ctggcttgtg 120
taactatgag cttcaaaagc aaagaacgca tcatctattt ttgtgtctct tcttccaagg 180
acttaqtqta tcacttactq qctaaatqct tgagacaaaa acagggatta atgaagaaga 240
aagagaaaga aaaggaaggg aaagtgccca caattactga cagggtttca gtaaagcagt 300
ctagagggtc aggtattttc catagccatg ccccagagtg ggtgttgcca ctttagctgc 360
cctggtctgg ctgaaggcca ggacttgatt gttgatggcc cttcctttgc tgctagtcac 420
tgttaagtac tgcagattta cagaaagctt catggaggtc tgtaagaagc cagaggtgat 480
aacaccaaga tttagagcca ctgaccagca gaatgcagaa tgtccaggct atgatccagg 540
ttqtaqatcc tqatctqact actcaagact ggttgaaggc aaggttcact tggattcact 600
ctatttgcca gcagatgttt taaatccatc atatatatat atatatctcc attactttag 660
gacagtggtt ctcagccttc ctaatgctgt agccctttaa tagagttcct catattgtga 720
ttgtaaaaat tattttgttg ctacttcatg actaattttg ctactgtgaa agggtcattt 780
taccccaggc tgttgagacc cacatgttgg gaaccactac tttagaaggc attggggttg 840
gagaagaaca tgaagaatag agtaacagtg gtcagttttg gttcattata tcacagaaac 900
attcacttta aggtttcagc atgtttgttg tgtatatgtg attgtgtaaa gacttcacca 960
ggtctttctt taatcaccat acctaacatc ttcaccactc catatccatc agcttcacct 1020
tgtactctag catttgggca ttcatcctgt accagggcag gcatccattc ttttgcaact 1080
cacattgttt cctagttttg attattacca acaatgcttc tagaccatga attttggtct 1140
ttgacttttg cttggtaaac atcataaaac aatccagtgg tggtggttggt gccgctgctg 1200
ctggtggtgg tggtaaagca ggaagccata aagtgccttt attcaatctg tatttgatac 1260
aaattqttat ttcttcccat qtaaaagata tggcatctga agtgtagagg tctgaattca 1320
aacctcacat caccaqataq tatattacag actcaacaaa taatacacgg ctttgcctga 1380
cttcaaaqcc ctqttcttqa cgtaagtata tgagtaacaa tggtagcacc ttagttttta 1440
```

```
tcagttcact aaatatttat ataagaccta ctatgaaggg agatagaagg gtatgaggtg 1500
gggtcatggg aataggaaaa cggtggaagg gagaaggaga attaacaaaa gctaattatg 1560
tttqaaaatg ccacaatgaa acctaattta caaaagaacc actatatgac cttcacagtg 1620
tqtqctaaqt cttgqagatt tagtgqtgaa gaaqtcaggt gtgtttccaa tctcatggag 1680
gatgtaatca gttagagagc acaggagcac ataaaaagat aggcaaaaat gtatgattag 1740
taccatgtaa gatatgaagg ggaacacagg aaactagtgg ggagacctaa tttagtttga 1800
gtggtcttca aagacccttt agaagctgag aactaaagac agcaagcaag gtgagggcag 1860
catctccacc tttccagtgg aatgagcaac ttagggtata cagctgattc ccacattgtc 1920
aacaaggete tteagagaet agagatgeae taatgatgae eataeceage ttttaaggaa 1980
ggtttctgag catgtccaag caccctacac taggcattgg aaatcaacat gtccagagat 2040
ggaagtgaca gtcagtaagc caaccctttt caaaacttcc aaagctatta ctcgtcaact 2100
ctccagacat atgggccccg agtgtgttgg gaagctctca ttattgttct ttgattggtt 2160
ctctacattc cgagatccaa ggagcagtta tctcaggtag aggatcgtgg aatgtctgcc 2220
catgattaac ttcaatttat acctgtaagt tataccacat cctaaacacg ctgatgtccc 2280
agagaacatt ttgaccagct gctaacaaaa cccaggagca tttagaaaaa aactgagtca 2340
cccaccgttc tggataatga tggagagaaa caaatgggat tattcttaca gagtatgaaa 2400
gttacataat tttcctggat aatggagaat taattaaaca tcagcatctt ttctggactg 2460
cagagggaag acagaggtga agccaatctt tccgggaaat ggaggaggaa agaatttgac 2520
tactatttgg gggttaacaa tacatcttac tagcatggca aaggaaactg ggctgctttt 2580
caqaqtaagc caccccaqta qatqctqcaa ggctgtgctt tcatcccagg agaaagtcaa 2640
cagggccagg catgccagaa catgcccata atgtaaccac ttaggctgag gcagaaagat 2700
caaaaatccc aqqccaqctt aqtttqtqta acaaqacctt tqctcaaaca aaqatttaca 2760
aaacaaacaa qcaaacaaac aaatataaaa aaqqaqaaqa aaataactqc caqqqqaqqc 2820
tqtqaqcaat gaaqacttga tgagtgacca tctcgcacag tggacgcttg tgtctagaag 2880
gtaagggctt ggcaatgttt cccaggtttt ccattcctgg tttatatggc ttgaggccag 2940
tggacttcac aatgtctcag cttccaggtc tttatacaga gcatattagc cacatgtggt 3000
agettgtgee tgtaatgetg geaettgaga gaecaagaea ggaggattge cacaagtete 3060
catccagcct aggtgctgtg tcactctgtc tcacccctga cccagtccca cccaacatca 3120
aacaggctat cactgtgaca ctggtactga gtcagaatca cccagattaa agattctggg 3180
agatcagtcc tggggatgcg ggaagtgaga ccagttattt aataattctt atactcatga 3240
gatgatggat ccagatgaga aattgtaaaa attttaggtt ttataattga agaaataggt 3300
ggtttcttca ggttacatct ctccactgtt ggtcatttca gctaaggtca ctccccattg 3360
attectgtga ggeteteaca teccaggtet etgggaettt etagaggtte eegetgette 3420
ccaqccctga aaatgcgtat ttctattcat tctcctggca ttctgggctt ctctcctgtc 3480
ccccgcccca cccaacact gatectgcc cetttetete ccccttetet etetaaacca 3540
ggtccctccc tccctctgct tcccatgatt attttgttcc ctcctctaaa tgagtctgaa 3600
gcatcctcac ttggacnttc cttcttgtta aacttcatat ggtctgtgag ttgtatcatg 3660
ggtattetgt aettttttgg etaatgttte aettateagt gagtgeaaac caggeatate 3720
cttttgagtt tgggttacct cactcaggat gatattttct agttctatcc attcgcctgc 3780
aaaattcatq atqtcctaat ttttaqtagc tqaataqtat tccattgtgt aaatgaacca 3840
tattttctqc atctqttctt caqctqaqqq aaatctqqqt tqtttccaqc ttctaggtat 3900
tataaataag gttgctatga acatagtgga acacatatcc ttgaggtatg gtagagcatc 3960
ttttqqqtat atatccaqqa qtqqatagtt qqqttttcaq gtaqaactat ttccaatttt 4020
ctaaggaacc accagattga tttttagata, gacagggccc ctagtggaga gatggggcca 4080
aacacctacc ttcaaaaatt tggtccagaa ttgttcctct ctaaaagaaa tgcagggaca 4140
aaaatqaaac agagactgac caacccaact taggatccat cctatgggca agcaccaaac 4200
ccagacteta ttattgatge catgttgtge ttgcagacag gagettagea tggetgteet 4260
ctgagacact ctatcagcag ctgactggga cagatgcaga tgccaaccct tgaactgagg 4320
tccaggaccc ctatggaaga attaggggaa ggtttgaagg agctgaaggg gatggcaacc 4380
ccataggaaa aacaagtgtc aactaaccct cagagctccc agagactaag ccaccaacta 4440
aagagcatac atgggctggt ttgtggtccc tggcagagga ctgccttgtc tggcctcagt 4500
aggagaggat gtgcctaatc ctctagagac ttgatgcccc agggaagggg acaaggaggg 4560
gacaaggtgg ggattggtgt ggggtagtgg gggttggggg tgggggtggg gatgtgaatg 4620
gqtgaqtgag ggagggaatg agtgagtggg tggtacagca tcctctcaga ggcaaagggg 4680
aaggggagtg gataacaaac tctgggagca gggacgggga aggagggcaa catttgtaat 4740
taaataaata aaataattta ataaaaaaaa tgaagaaaca ggataacttg ggaatggtta 4800
```

```
cagcagggct gggattagaa cccaaaaagt ttattctgag actcttttcc aataccaagc 4860
ttaaagtttt cttcagaatt ctatagaatg cctttttggc agaagttctt tggactttaa 4920
taaagaacat attgaagaga tgaaaagaag cttactaaga tctaatgaaa atcaagatgc 4980
taggcacagt gccagatact ttaacatagt aatatgactc tttagagttt tgagacaggg 5040
cctcatatag tttatgatga attcactgtt ttgtcaaaga tgaccttgaa ctcttaatcc 5100
attcccaaag tgttgttgtc atatgtttgc accactcctg gcttcatagt gtttttaaaa 5160
cacccatgga gagtcgggtg tgaagatcca cacgtctaac ctcagcatct ggtgaatcaa 5220
ggcaggaggg cgggtggttg caggctggct ataatatcta agtttcagtt agtaagggct 5280
gcataatgaa acactgtctt aaacacaaaa ccaaaaccca tgaaggagat actattgcca 5340
tttaaaagtc tctggaatgg aaatagctat cataatctta cctctgagcc agtgtctgcc 5400
ctcaggtgtg cctgaggact gaacagggct atgcactcct caggttggaa acattactag 5460
teeteagtgt etgetettga cetgttaaca getgagteag ggtetgeeet eagetgtgee 5520
tgaggacaga gctgagctat ctacccctgc agattggaag cattacaggc actcaagatc 5580
agccctgaag tgataaaacc taaggcagaa atccaccaag actagcagtg cctccgtgtc 5640
tetteetgtg getggtggga aagaggggg cagteettee ttgatgcaag gtegtgtgte 5700
tagtggcacg cttccttcat tcccagtgag agcaagtgat cacctgggta aggaaggttc 5760
aggtgcctga gctcgctgga gaattcatca ctcatccatc actctgctcc tgtagacata 5820
atcacttctg ttgggtcttt atagagatga tttataactt tgttgtttat agtttttatg 5880
aatgtgtgta ttcatttagg tcacatggga ggtacacatt ttcaggtgtc tgtctttcca 5940
tcacacgggc tttgaattaa actcagtctt ggttttaccg gctgagccat ctcacctgcc 6000
tgattattta aaaatctccg gagtaatcca ggagtgtggt ttatgattgt agtatcaaca 6060
ctcgggaggc tgagggagca tcgttatcat gagctccagg ctagttccag gcttgcctaa 6120
gctgtagagc aagtcactct cttaaaaagt gcctctccca tatttttgta tataatttgc 6180
atctgaaatt ctgtttgcca ataactatga aattattcac attactaaaa tcttcctgtg 6240
ccaagttctc caacgaatta gatcacactc agatgaaatg ctaataaaaa ttaaagctgt 6300
agccagtagc atgcgtatat ttgggctcag ggccaacagg caggcgatct gggtgtaaga 6360
aaataggcta atggctgtgg aatctggtct ctagtggctc cgctgagagc tgacctcaac 6420
cacgeteect caaattgatt geetteeagg ttatgattte teatcacagg aaactttgtt 6480
gcccaattca aaccctgtga gtgaaaacaa aaacaggaga gcaagtgctg ctccccgtgc 6540
cccaaagccc cttctgtcag ggatcccaaa tgcaccccag agaacagctt agcctgcaag 6600
ggctggtcct catcgcatac catacatagg tggagggctt gttattcaat tcctggccta 6660
tgagaggata cccctattgt tcctgaaaat gctgaccagg accttacttg taacaaagat 6720
ccctctgccc cacaatccag ttaaggcagg agcaggagcc ggagcaggag cagaagataa 6780
gccttggatg aagggcaaga tggatagggc tcgctctgcc ccaagccctg ctgataccaa 6840
gtgcctttaa gatacagcct ttcccatcct aatctgcaaa ggaaacagga aaaaggaact 6900
taaccetece tgtgeteaga cagaaatgag actgttaceg cetgettetg tggtgtttet 6960
ccttgccgcc aacttgtaaa caaqagcgag tggaccatgc gagcgggaag tcgcaaagtt 7020
gtgagttgtt gaaagcttcc cagggactca tgctcatctg tggacgctgg atggggagat 7080
                                                                  7093
ctggggaagt atg
<210> 41
<211> 1659
<212> DNA
<213> Mus sp.
<400> 41
ctcgaggtcc agtatggctt ctcaaccttc ttggcaagaa ggctgcaggg acgaccagga 60
agtttgaaac agtcttagaa gaaaatgctg gcttagagac aggtggcaat gggggatggg 120
gagcagtatt ctggtttgca tagaggcaga gtccttccaa gtgctgggaa acaaggcagg 180
agggcaggga tagagcaaat gatggctctg tatgtgtccc tgttcagttt gcatttaatc 240
tgagcaaaat ttggcttttg acatctgcaa ctcaaaagaa ggtaattagg caaatgactg 300
acacatagat atcttaatag tcaaggaatt ttttttttt tttttgaaga gttagcagtc 360
aggggatggt agaaactgca aaaccaatcc gtattctttc ttgagatttt tagacagttg 420
atgctactag ccacaaaaag agttttaagt gggaggagag taagatgcag gcaccaaggt 480
gacaggetee aggtetgtag cattagetta cagatgagat tetttacaga gagecaggea 540
gctgcattgg ctaaagcaga tctgggaggg ggccaggaga tcagctggcg gcactcccag 600
```

```
cctccaqqaa aqqcaaccct tatttctqqa attttaaact gataacccaa ttcccaccag 660
cctqqccaqq ctcttcctta qctcacatca caaacacaqa aqqattqttt taqatggagt 720
catgettgat tetttetata cetaetteea agaccaattt tataaaagtt tatttacege 780
tggatgtcag agtttggttc tctccttctg cagtgtggct cttagagatt gaactcagat 900
catgagcaag caccttgctg cctgctatgt ccctccagca gtctgaccat gttccttccc 960
ccaagattgt ggaagctgga ctgaagatca caatctgcca gatgggcaga atctttactc 1020
tttggcacat ttgttgctga tggggagtga atacccatgg ggacatggct gtcatggtgt 1080
qqaaqtqata qaaatgaaaa catgtatgga tctgtcacag gagctggtga ggctgatggg 1140
tgtgtgggtg gccactgttt gctctctgct tgtcacagcc tcttgttcag ggcttgatca 1200
ggcaggtgtg tgtgtgtgt tgtgtgtgtg tgtgtgtgtg tgtgtgtgtgt cacacccatc 1260
tcagcagatc tgtcagcttt cccgcttttg ttagagggtg atatcatgct tcctgggggg 1320
agetetggaa gacaatgage agecaettte etetagatae aataggegga gteaggaagg 1380
tagtattgac attgctgggg cctaggagct actcactgct cggtggccgt cagatggtga 1440
accepted a cettegeaca caggeetggg etgtacaagg egtetggetg cagggeeaaa 1500
qaqqactcca ccctaqqqac aqqagtactt cagacatctg ggaatctggg atgggtttta 1560
aaattcaqat cccaatataa aaaaacaact cccaaacaaa cagcagcaat taaaaaaaaa 1620
aaaaaaaacc agcctcccaa gtaaaacaat aatggtacc
                                                                1659
<210> 42
<211> 33
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: primer F51
<400> 42
                                                                33
cccagtgtct ctgatttagg gagagcacct gag
<210> 43
<211> 26
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: primer R51
<400> 43
ccagactgcc ttgggaaaag cgcctc
                                                                26
<210> 44
<211> 35
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: primer F52
<400> 44
                                                                35
cagtgagagt cttctctgtc cctcaatcgg ttctg
<210> 45
<211> 26
<212> DNA
<213> Artificial Sequence
```

```
<223> Description of Artificial Sequence: primer R52
<400> 45
                                                                   26
tggatgtgga atgtgtgcga ggccag
<210> 46
<211> 32
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: primer F31
<400> 46
aatcaaagag gcgaactgtg tgtgagaggt cc
                                                                   32
<210> 47
<211> 26
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: primer R31
<400> 47
                                                                   26
cggctcccca aaatgtggaa gcaagc
<210> 48
<211> 30
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: primer F32
<400> 48
                                                                    30
gaatccatct tgctccaaca ccccaacatc
<210> 49
<211> 26
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: primer R32
<400> 49
                                                                    26
cgcctcctct ccccagtctc cccttg
<210> 50
<211> 4998
<212> DNA
<213> Mus sp.
```

<400> 50 tocacccacc tgtttctcac gtccccggcc ttcctagtta acttcatggt taaagaagcc 60 tcaccegggg agggtgtggt gccacagaag gaagggtgct cccacaagcc cccagtgtct 120 ctgatttagg gagagcacct gagcccagtg agagtcttct ctgtccctca atcggttctg 180 aaattcccca cttgccctcc ttatccaggg gacagggctg cccaccctat tcaggacagt 240 agtettaaac tegtagecaa cagaettttt attgggetgg gagaaagaga tgaggeteet 300 qaaqctcagc cgagtgggct ctgattccta cttctcagag gtcgggcagc ccagccaata 360 ctgagcaatg gagcgtgggt agggaggatt cacagagtcc actcgccggg ttctaaggtt 420 gactcggtag tatttgtctg aaagaaagaa tggaaaaagg gttatgtgag attctgcctg 480 atcctgtcca ctggtcccaa gaaggataaa ggctttttct cagaagggaa agtgaacatc 540 caccaagcag ataatgtcac catctacagg ctgtgttcag cacccaggga ccaagacctg 600 caggcaaggc ctagccaaaa ccagtctaag gagtagaaag gggctcccac ctccagagaa 660 gaaatagacg ctctgaatgg gctcgcaggt ggcaggtaca agccagtcca tatcataatc 720 ataqttqttq taggttccta gcccactctc ctcgctggag aacaaagaga accagattga 780 acgtgatgaa cgacgggagt tegagetetg getgegtetg tggecaegee eteggegtga 840 acgatagcgc tttcggcttc tacgcttaga cttctgtttt ttggcttggg cagagtggga 900 taaggagcca gtgacgtaga tgcggccggc catagcagcg tccactttcc ctggcacacc 960 atgccagttc cggctgatga attggggttc tctggctcca tctgtaacag ggaaggggtt 1020 aatgcacttg gcagattctg gctttgattt ctccagcaag gttgtctgtc tatctattta 1080 tctatcttta tctatgtatc tatctatata tctatgtatc tatctatcta tcatctacct 1140 acctacttac ctatctatgt atctatctat ctatcatcta cctacctact tacctatcta 1200 cctatttatt tgtttgtttg ttttctttga aacaggatct tagcacctac ctatggctgg 1260 tttgcaactc actatgaagc cataactggc ctcttaactc acaaagatcc acttgcctgt 1320 gtctctgagt gctgggatta aaagcatgtg ccactacacc cagctccagt aggaccttta 1380 gaacacattt gctatgcctt gcctaagaca cacaactcag tccccaggcc ccagcctccc 1440 tgtctagage tttttcccat ceteteteca etgtatecet tgaatetetg ceceateega 1500 aaccectcag egegeageee etecttetge tgtgttagge aaagteeaag gtatgggate 1560 caaatagagc caagcctcat cccccaaaag tcaacagaag caaagtctag ccagagcaaa 1620 cagetettga tegatggtgt cacagtteca ggeceeteee etggaageee eeactateae 1680 agcccagttt ccagagaaag aagccagcct tgctctccct ccataccaga ggatctgccc 1740 cagaagagga gttcgaaaat gttctcccag ctgtcccgct gaagcaaggc aaagtgctca 1800 aacacggctg acagagagct gccttcgcac tectectggc tgggttgctg ctgaaattcg 1860 tactcccagt actgcttccc tgaggagcag aacagctggc atcaggagag atctgaccaa 1920 ggcagagagg aatcatggaa tagaacaggg actccaccac ctgccccctt ctcctccacc 1980 ctqaqtaccc ttqaaqaaqt agaccctttc ccggccactg taacggtggg caggaagggc 2040 gaacgctgca tcaacattgt ctggtatgcc actgaagcct tcggagatgt ttcggggata 2100 accagggtcc aggaccccat cctcaaagcg ccagtactga ctaccctgaa agacagagat 2160 cagaagggtg aggacatacc gctggccaca gaagcagtcc tatatcctaa actggctgtc 2220 acctgetect ggagtecetg actgetttgt etteacaget ecceageaeg tecatggeae 2280 cctttacctt gcctcagact taggtctggt accttgaaca agtaggtctt cccctgacag 2340 ttgatgcgag tgaaggcagc atcgatgggg ccctcaatgc cccagacatc ttggataagt 2400 ttggggtacc caggcctcac tgccgtctca tctagctcat agcagtactg ccctagaaca 2460 ggggaaactg tgtgagaagc agatgagcct aaggcagatc cgaccgccac cagacctgtc 2520 catagagtca cctcggaagg caaagaggga cccattcttg agatccgtga aggcgtcaaa 2580 gggctttcca ctgcacagtt cttcctctgg aaactcaggg gtcccttgat cagtggtgtc 2640 qqqccttaqq atctcctcct gttgctccac tttaggcgct ggggtgcttg gctgttcctc 2700 aggatetagg aaggetgteg getttagagt geegteegte egaggattta ggteaeeggg 2760 tggagaggtg ttctcgggtt gcacaccggt gttggtattg ttcttgggct cctccacgta 2820 gtcatagete caataateat cetetggeat agtgaacaeg teeceeegeg ttactgeagg 2880 cagaacgggg agcagtgagt gtcaggctgt ggaggggagcc ccaggcccac ccaccagggc 2940 tetgaactca cettgggget tgcactgete catgtagteg gcacageage tetgatagta 3000 agtgcaaagc tcgtcacact gacacttctt gctggccatg aaaccctgag tgcagcggcc 3060 cttgcatgac tctatgggag ggaatatcag gtttacagcc caatctaggg cacctgccca 3120 acctgcactt ccctaggtac ccaccaatcc cctcccacac cttggtcagc cagagaaacc 3180 catgccacca gggctagtat gaaaaagggc ctcaggggtg ccatggcagg cctctagccc 3240 agggccttgg caagctgggc gcggagcttc tggaatctcg ctgtcctgcc tgaaaaaaaga 3300

```
ggcccagccc cattgccctc ctccaaacac agctgcagca aagggtcaca ttcccagaac 3420
cccagcccca ggagagctgg gaaacagaaa accctcgcca agaccaaagt cagtagggtc 3480
acgggcagga gggataacac gcttagctta gctggggagg tggaaagaag catgtgttgt 3540
caccetetga gecagteeeg ttaateteee tgageettae tttttataaa gtgggaceat 3600
ggtgccttgc ctcatcaggt gttgagagat tccgtgagct agaacagaca aaacgtttcg 3660
tgcctggagt agcttccaac tcattcccat aagccgttat cgatttactg tttgatcagg 3720
ctaggtgctt gtcccatcct acccccgct tcgaatctgg atttttgggg caagaagggg 3780
ggttggggga gagctggcaa gcactttggg ggaggttttc ttttcttctc ataaaagaac 3840
aaaqcttcat ttctqgcctc tccttgttct ctctaagctg ggtgttacag cataggaagt 3900
agtgggtcag agtctattct tctttcttta ttttttttag atttatttat tttatgtttt 3960
gtgtataagt gtctgctcac atgtgcatct gtgcaccaca tgcatgtctt gtgtctatgg 4020
aggtcagaag agggctttga ataccctgga actggagttt tgaacagtta tgagctgccg 4080
tgtggatgct gagaatcaaa cccaggtcct ctgtaagaac aagtactctt aaaggctgag 4140
ccatctttcc agtcccagag cccattcctg aggctttcac taatccattg atcctcgggg 4200
gaccaccctg gccacacctt caatgacctc atttatttta aaaaaaaaat ggactcattg 4260
ggcatacttt ctagactcac atactaagtg ggatttctct ataaagaagt gctcactggg 4320
gtagagtgcc aggttttggg ccaaattcca agcactggca cacttctgaa gcccctccgt 4380
tttctgttct gtaatcacag gcgagcgtgc ctttggtgtc tcttctctat ggaccgcagt 4440
agtotcagog gcaaaatgaa acactaaatt ttactoocta cagacgogtg aagcotaagt 4500
ggaaaccggc attaaagggc tttaagaatc tcaactgcga ttctttaacc atccggaggg 4560
gacgtggata catgtagcca gcttgcttcc acattttggg gagccgagcg agcggtagga 4620
aatggaagac agctctttac agccctttct acagcatctt gcacaccacc aaggggagac 4680
tggggagagg aggcggagcc aggtgtgggc gtggctggag acctggggta ggcttgcgcc 4740
tgcgtcgggg gcggagcccg tgaaacctag aggcggggcg tcaaatcctt gactctgctg 4800
ctcagaggcg tggttgctgt tgagcatctt agctccgctg tgcttagatt ggagcagcgc 4860
tttgttccgg gcaccggcgt ctctaccctc ccgcgtctgg tccatgcttc tctctccctt 4920
catqueette etaaqteget gagteeegga getgeeetee teettetget tetacaettg 4980
                                                                  4998
tagcccagca cctttacc
<210> 51
<211> 11176
<212> DNA
<213> Mus sp.
<400> 51
gcagctgggc aaacgttggc gatgccggtg caaagtatat acccggtggt tagcagaagc 60
tgagaacttt tagccgaaag ccggctccct aagccgaagc taggcaagta ggggaagaaa 120
aagaaaaaaa aaattccaga gaagcttcca gagcctcctc ctcttccctc ttccttcaaa 180
aggactgcaa gtccgcagtc accetecace cagcaagagt tagggceteg aaccecggte 240
acgctgcctc cgcctcctgc cgaacgtaac gggggacccg tgcgtaaagc gtgacgcgct 300
ggaateetee gtetgaegeg gggeaegeae aggeegeage ceeteegeee geeeegeeee 360
tgacgtccgg gcacgttcta ttttggaacg ccgaggccac gttgctaagg gagggggcag 420
cgtggctttg tgattggctg tcgcgcgcag ctttagccaa tcagcgttcc cttcctattt 480
gtagagegta getecettee tigetittig tggtiettee egigetgggg gietecaaga 540
qqaqaqctag gattcttgtc gcgatcggga ctcgttgtca ccccatggtc tgcgaggact 600
tgtgtggacc tggtctgttg tcataagcta gaggcttttg gctgagtgtt agcgcctcta 660
agggggaact gaaggcetea teetteteag geacacatat aegtgeteet gagetetaga 720
cactcagtcc ttccgaggtg ttcaaacact agatgagcta gcctacggag aggcagccag 780
gtggtctcta aaaggtctgc cttcccttag ttcccaggct ctgattggcc agggattcag 840
cccttccctc gccacgcccc ctagagtagt taagcctcta ggattccact tgcgggaagg 900
ggggggggg gggcgtgatg gacgcttctt ggggacgcag atcctatgtc accccatccc 960
ctgcaagaca gtctgagaga ttctcgctgt cacttttctc tgcctatcag ttcactgaaa 1020
cctgtcagtc tcactgggaa gagacagaca ctcggaaggg atgctctcaa ctcttaggcc 1080
ggtcccccaa caccgttgga actgggatct ccgcctgcgg gagccctcat gcagtggggg 1140
gtgtgtttgt gtgtgagtgg agaggaaggc ttggctaagg cctctccctc tccctcctc 1200
```

agcagactga agaagagttc ctagttccct gggtttctgc cctttatttg ctcatcctct 3360

```
tgtggtgggg gttggggggt tttggctgta tgtgtgtgtg aatgtctgtg gctccatccc 1260
gggagtttgt caccaggttc tgtccagcct cctctcccac ccacccccc acacctaaga 1320
gtcaccaacc cggggtgtga ttcaccaccc gctggaaccg tgcaaccttt ccccgaggaa 1380
gaaggaggag gtagaaggca gttgaacaga atctctcatt aaccactgcg tcacggtgta 1440
gtggaagggt gggtgttgtg gctttttgcc tgtgacacac acatccacac ccgctcaccc 1500
tgtgctcact cacagggtcg gtctctctta tctctcttgg gcgtgtgtgt gtcggtggct 1560
ttgtttgtgt gtctacgcct gtgtgtgtat gtctcacccc gtaggagtgc gccggtctcg 1620
gggaaatgcc cggctccttc gtgccaacgg tcaccgcaat cacaaccagc caggatcttc 1680
agtggctcgt gcaacccacc ctcatctctt ccatggccca gtcccagggg cagccactgg 1740
cctcccagcc tccagctgtt gacccttatg acatgccagg aaccagctac tcaaccccag 1800
gcctgagtgc ctacagcact ggcggggcaa gcggaagtgg tgggccttca accagcacaa 1860
ccaccagtgg acctgtgtct gcccgtccag ccagagccag gcctagaaga ccccgagaag 1920
agacagtaag tatgaggcct caggagttgg gatggaggag cctagctagg gatgtgggct 1980
cagtttgtac agtgccttgc tgccatgcat gaagatccct agcacagcat aagccaggag 2040
tggttatgca gacctgtaac cccagctctc agaaggtgga ggcaggagga gcaggagttc 2100
gaggccagcc tgtgctactt atggagtcca gcctgcactg caagagatca ttattttcaa 2160
aagttggcct tggggggagg tgggtgaggg aagtaagaga aagtgacagt aattttgtca 2220
cttaatagtt ggaggtteet etgaggeete aagtetgaag gaaetttaee attetggeea 2280
gtgaggagta ggggttatta tttggggttc aggaggaagg aagttttctt agggctgata 2340
gaggtacccc cagateteat ggteettate tetgaeteag ettaccccag aagaagaaga 2400
aaagcgaagg gttcgcagag agcggaacaa gctggctgca gctaagtgca ggaaccgtcg 2460
gagggagctg acagatcgac ttcaggcggt aaggaggagt ctgggggtgt cttgaggccg 2520
tgctgggagc actctgcctt gttcttcccc cgtttctcac tgtgcctgtg tcctaaacga 2580
ggaaaccccc tcttagggaa caggggtcag tataggctga tggagtggct ccatatgcat 2640
gctcagaccc atgcccactt actttcgact gttccccact ttccctgaat atgtccccac 2700
atgtcaccct cctggctttc tctcagccta aggagacaag ctagaggagg taattctctc 2760
accttctttt cttcactaaa taataatcca ttttgccttc ctgcctccat tttttttcc 2820
tgagctgggg atctacctgt cgtagttcag ccctcctccc ccaacttgat agcctcaagt 2880
ttcagccctt ggctgagatg ccatcatcct gactggctct ggctggaaac tattttgtgc 2940
taagtcaatt cettgtetge tactteaget atctacagty etgeegaact tgagetggtg 3000
gegeceacea ageceaette tttetetett ttttacetea gtgcaacece ecacacaca 3060
aacttcatgc ctgccccttg aaaccagggt gcgtctctga ctccccgtcg ggaggctgaa 3120
ggagatgggt aacagaacct cattaaaaac aacacataag cattacctac tgactcaaca 3180
aactgtagtg tttttctttt ttcctctcaa aaaattattt cgtttgttta tttattattt 3240
gcttatgttt gagtgagtgc tggtgcacca cagcacacat acgaggtcag agggaaattt 3300
tcatagtttg ttctctcctt ccgtgttgtg ggtgcttgct ggcaatctcc ttcactcagt 3360
gagetacaat geceeettet gecetttaag geagagtaet eettagtaca gggggaeeet 3420
ttcctcggcc tctcaaagtt gagattacaa atgttcacca tcacaccagg cttggagttc 3480
ttgcctatca gtgacgtcca ctcctgccta gcttcttccc aaccatcttt tagtctgatg 3540
gggaaaccga ggcacgagta gcatggtcta ccaggatttc ctcttagggg acggtcccct 3600
cagttgggag ggagctgtcc agccccctgg atcagcagca agaatgtatg agtgtggggt 3660
tgggcgggtg aagctactct gtgtggtcgc tgaccagcaa ttctcctttc tctgtctcct 3720
atgacctggc cctgctggga tccattagga aactgatcag cttgaagagg aaaaggcaga 3780
gctggagtcg gagatcgccg agctgcaaaa agagaaggaa cgcctggagt ttgtcctggt 3840
ggcccacaaa ccgggctgca agatccccta cgaagagggg ccggggccag gcccgctggc 3900
cgaggtgaga gatttgccag ggtcaacatc cgctaaggaa gacggcttcg gctggctgct 3960
geogeocect ecaceacege ecetgecett ecagageage egagaegeae eceeeaacet 4020
gacggettet etetttacae acagtgaagt teaagteete ggegaeeeet teeeegttgt 4080
tagecetteg tacaetteet egtttgteet eacetgeeeg gaggteteeg egttegeegg 4140
cgcccaacgc accageggca gegagcagcc gtccgacceg etgaactege cetecettet 4200
tgctctgtaa actctttaga caaacaaaac aaacaaaccc gcaaggaaca aggaggagga 4260
agatgaggag gagagggag gaagcagtcc gggggtgtgt gtgtggaccc tttgactctt 4320
ctgtctgacc acctgccgcc tctgccatcg gacatgacgg aaggacctcc tttgtgtttt 4380
gtgctctgtc tctggttttc tgtgccccgg cgagaccgga gagctggtga ctttggggac 4440
agggggtggg gcggggatga acacccctcc tgcatatctt tgtcctgtta cttcaaccca 4500
acttctgggg atagatggct gactgggtgg gtagggtggg gtgcaacgcc cacctttggc 4560
```

```
gtcttacgtg aggctggagg ggaaagagtg ctgagtgtgg ggtgcagggt gggttgaggt 4620
cgagctggca tgcacctcca gagagaccca acgaggaaat gacagcaccg tcctgtcctt 4680
cttttccccc acccaccat ccaccetcaa gggtgcaggg tgaccaagat agetetgttt 4740
tgctccctcg ggccttagct gattaactta acatttccaa gaggttacaa cctcctcctg 4800
gacgaattga gcccccgact gagggaagtc gatgccccct ttgggagtct gctaacccca 4860
cttcccgctg attccaaaat gtgaacccct atctgactgc tcagtctttc cctcctggga 4920
aaactggctc aggttggatt tttttcctcg tctgctacag agccccctcc caactcaggc 4980
eegeteecae eeetgtgeag tattatgeta tgteeetete acceteacee eeaceecagg 5040
egecettgge egteetegtt gggeettaet ggttttggge ageaggggge getgegaege 5100
ccatcttgct ggagcgcttt atactgtgaa tgagtggtcg gattgctggg cgcgcggat 5160
qqqattqacc cccaqccctc caaaactttt cctgggcctc cccttcttcc acttgcttcc 5220
teceteccet tgacagggag ttagactega aaggatgace acgacgcate ceggtggeet 5280
tettgeteag geoceagaet tittetetit aagteetteg cetteeceag cetaggaege 5340
caacttetee ceaecetggg ageceegeat ceteteacag aggtegagge aatttteaga 5400
gaagttttca gggctgaggc tttggctccc ctatcctcga tatttgaatc cccaaatagt 5460
ttttggacta gcatacttaa gagggggctg agttcccact atcccactcc atccaattcc 5520
ttcagtccca aagacgagtt ctgtcccttc cctccagctt tcacctcgtg agaatcccac 5580
gagtcagatt tctattttct aatattgggg agatgggccc taccgcccgt cccccgtgct 5640
gcatggaaca ttccataccc tgtcctgggc cctaggttcc aaacctaatc ccaaacccca 5700
cccccagcta tttatccctt tcctggttcc caaaaagcac ttatatctat tatgtataaa 5760
gagetteett gtttteaagt gtgetgtgga gtteaaaate gettetgggg attttgagtea 5880
gactttctgg ctgtcccttt ttgtcacttt tttgttgttg tctcggctcc tctggctgtt 5940
ggagacagte eeggeetete cetttateet tteteaagte tgtetegete agaceaette 6000
caacatgtct ccactctcaa tgactctgat ctccggtctg tctgttaatt ctggatttgt 6060
cggggacatg caattttact tctgtaagta agtgtgactg ggtggtagat tttttacaat 6120
ctatatcgtt gagaattctg ggtggaaatg tctgatcagg agaagggcct gccactgccg 6180
accacaatte attgacteca tageceteae ecaggetgta tttgtgattt ttttcatttt 6240
gtttttttgt attttgcacc tgaccccggg ggtgctgggg cagtctatca ctgggcagct 6300
cccctccccc ccttggttct gcactgtcgc caataaaaag cttttaaaaa actgtatcct 6360
tcaqqtcaaa gtgtctgttt tccctggaca tctactacat ggcttccttt cagaaaaacg 6420
gagtttggat tgctagggaa gtcttgctgg cacttagtgg gacgcctaac gaatcagaac 6480
ctacaacqqq actaaaaqqa aqtqqagact tgctaggttt tcccatgttc ccaggctggg 6540
ccacctactt gaaaaaataa ggggcggaaa agtgtaaggt accaaatttg gtgaagggtc 6600
tgggagaatt tcatgatcgg aaaagaattt attcaccttg ggtgtgcaat gaactttcag 6660
caacagttaa gggcaagggt gtaaaagctg ggcacaactt gtaaatccta gcatttgaga 6720
ggtggaggca aggggatcaa ctggtggagt tcagtgtcat gtggatcgta gataccaagc 6780
gcaaagatet getatgggga gagggettgg tacaccaggg gagecagaag tttegtggtg 6840
agggtagtgg agggcaagtg gagagtgaga gttagcctca gggagattct acaggcaatg 6900
atgcagagtt cagacgctcc ctttgaaagc actagagagc cgcagcaggt tttgagcaga 6960
gaaggttaga gttaggtggt ctcttctagc ccatcccagg ctgaggagga cgctgagggt 7020
ttcaagaagg atcgagaatg gaaagcagag gagaagaagg atccaagagg catggaggag 7080
gcagaacaca tttctcttct ttaatagcaa gcctggaaag gataacttgc tgcaggagga 7140
gatgctcacc agtcgggtgg tctagggggt tcttggaaaa gagaaggcat ttgctcaagc 7200
ctcggttccc ccattctcgc tcttctgtca gcttgtcttc cattaagtgt gtgtctcaag 7260
gccaccctgc tcaggactcc ttgtgagacg accttctatg ctcgagttca ttaaaaacac 7320
aattgeetgg tgeegtgete tetecaetgg etcagttace teaaaagace agggetaaag 7380
gtgtgatcac aactctatcc ccattactgc tccaacgcag agacaggact gagccggagt 7440
gaacaaatga acaaaaatga ctaataatgc atgcgtgatt aaatacataa aagagcagat 7500
gactggatga gcaaatcgtt taaggagaga cagcaagatc ctagaatttt ggagactaat 7560
ttaaatccat ctttgagatg catttggtcg gaaattcctg ggaggaaaaa aagtgtaaat 7620
atgaagaga aataaatgag aataggggtg gcttcagaga ggttaactgc gcgctggtcg 7680
cttttgtaca agaatgtgaa ttgcagggag caaaatggga tagatactcc cgcccgaaag 7740
gtggaattga accactctgt cgctaaacag ctacaggttt gaagcctgca ccccagacca 7800
ctgaggatca tccgggcgaa aggagctatt ttcagttagt tatataaagg cgagatacta 7860
ctacttttta cacttatggt cattatttgt ggtatacagt agataattaa tttcaatggt 7920
```

```
ttcgaacatt ttttttcact ttttcttgtg aacatgtgtt tcctcagtaa agtgttccgt 7980
qaatgactct actaactaaa aagtaagtag cttcatttgc atagcgcctt gcattttggg 8040
aagcagcqcc taaagtgcct gtctccctaa ctaaaagcag aattttttgc aaagtgaaaa 8100
gtcagtttta tttttgtttg tttgtttgct tgtttgtttt taatggaaaa acttctcacg 8160
cggcccattc gtagcagaat tcgagatttt ctgcaagcga gaagcaagac tttcgtaggg 8220
tetgaeggea egeggeegea gagegaeace tgeegttget ttatagaact geaagtatgt 8280
agggaatcta ctgagtccct aggtgatgga gttgacaacc aactcccctt gagtttagac 8340
gctaaaaacc atcccttttt atatttatgt gattagccca gggaaactaa ggctcagaca 8400
tggataatac cacagoogag ttottgtago coaactooot aggggaaatg aaacotacag 8460
ttgtggtttt aatatgettg geecagggge agtggeeeta ttggeaggag tggeettatt 8520
agcggaggtg taccttgtta gagaagtgtg tcacttggag gcgaggtttt gaggtacgta 8580
tgctcaagtc tggccagtgt gatcctggct gtctgcagaa cgtggtctcc ttctggctgc 8640
cttcggatca aggtgtagaa ctctcagctc cttctccagc accatgtctg cctgcttaat 8700
getttgette tttecatgae gataatgaae tgtgeetetg aaaetgtaag teageeecee 8760
agttacatgt tttcttttat aagagttgca tatatatatg tatgtatata tgtatgtata 8820
tatgtatgta tatatata tatatataaa cagggtctca ctctttagct ctggctggcc 8880
tgaaattcac tatgtagccc aggattgcct gaactttgaa gcaatcttcc tgcctcagcc 8940
teceaatggt attacaggea tgagteacaa caageeattt aaatettatg atgaettata 9000
agaagacaga aaatcagagt teetttaeet agtteacaga teeetacaat etaacetegt 9060
tegetecata aacageeeta ecceaceete etggaactge tttgaggaat getgeagget 9120
ctcacaggca cactcctcct tggttaatct cttcagcctg gttgccttcc ccccccatgt 9180
ccatgtggcc caaagcctct catcctgttc tcaaatacca ctagctagta aggctccccg 9240
acctgacccg gtttaaatat tagaaaaggg tcactttctc cctgccacag acaaccaaac 9300
caccatatqc ttqtcactta ctacctqact atgaaggtta atagatgtct tcacaacctt 9360
tetetgagee teagttteee cacetgeata atgeatetga gacacagaat teeetagage 9420
tgtggttctc ctcattccta gtgctgggac cctttaatac atttcctcat gttgtggtga 9480
ccccaccacc accataaaat tatttccatt gatacttcat aactgtaatt ttttctattg 9540
ttatgaatag taatgtaagc atttgtgttt cccagtgatc ttagatgacc ctgtggaaga 9600
gtcattccac cccaaagggg tccccaccac aagttaagaa ttcctgccat agaggaatca 9660
cagggaccat ggattaacac ttgggtcgac ttttgggctg ccttctggga ggcgctagag 9720
ctaatgacag ctacatcaat ttctgaaatt ttgtgtgtgt gtgtgtgtgt gtgtgtgt 9780
gtgtgtgtgt gccctgagtc gggtgctgag ataggccagt ggctttagtg ttcctggacc 9840
cattactcac cagaactete eceteacetg attetttgat gtgaacacta tgtetteata 9900 🦟
gtggcggtgg caatagcagc aacagtgaac taaattttaa aagtagaact cagctggaga 9960
tacaaatatt qcagttttga agttggggtg gattgtctaa taacttaata acataaccca 10020
gaagagaggc cccttggtct tgcaaacttt atatgcctca gtacagggga acgccagggc 10080
caagaagtgg gagtgggtgg gtaggggagc agggtggggg gagggtatag gggactttcc 10140
ggatagcatt tgaaatgtaa atgaagaaaa tatctaataa aaatttgaaa aaaaatgtta 10200
ccccagtttg gcctggatct cactacctca accagactgg catgtgactc tgctgagatc 10260
tgcctacttc tgcctcctgg gtgcagaaga caatttttgg aagttagttc tcttcttcca 10320
tcttgtggat tccagggatt gaactcgggt catcaggctt ggctgcaagt gacttactta 10380
ggtgtctccc agaccctctc ggtttgatta gttagatgct gcacttcatg cctgactttc 10440
gcactatgta gatagagcaa tgtctataac atctcctaca atgatatgta tatcaagagc 10500
caagtgatga gatggctcag tgggtaagag cacagactgc tcttccaaag gtcccgagtt 10560
caaatcccag caatcacata gtggcttcca ttccctctta tggaatgtct gaagactgct 10620
acagtgtact tacatataat aaataaataa atcttaaaaa aaaaaaaccc agccgggcgt 10680
ggtggcgcac gcctttaatc ccagcacttg ggaggcagag gcaggcggat tcctgagttc 10740
gacgccagcc tggtctacag agtgagttcc acgacagcca gaactacaca gagaaaccct 10800
gtctcgaaaa aaaaaagaga gagagggaag tgagagcgca ataatcttaa catttctgtg 10860
gttgtctttg ctgtagtcta ttctgataag caatgctggc ttgctcccaa ggtaggaagt 10920
aacatttctt tataaaaggt atttgctctg ctttattttt ctgttttatt tatggtgctg 10980
aggatggaac ccaggaccct tggcaagcaa ggctagctgt ttaccactga gccatactcc 11040
ageettgeac tgggggatte taggeaaggg ttetaceact gageeacact ecceaecece 11100
atccctctct ggaagattct aggcagttcc atacctagcc tttgatcttt taagacggtc 11160
ttactagagc tcagtt
                                                                  11176
```